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(54) **Self-adhesive article for the obtainment of labels and similar items and the process for obtaining a self-adhesive article for the obtainment of labels and similar items**

(57) This abstract relates to a request for an patent of invention for the self-adhesive article for the obtainment of labels and similar items and the process of obtaining the same, covering preferentially a film in the form of a tape substantially comprising: a single frontal layer as the base for the printing (1), obtained from varnish; an intermediary layer (2) of pressure sensitive adhesive; and a layer for the protection of the adhesive (liner) (3), obtained from paper or silicone treated plastic; the process substantially include the steps of: a) — unrolling of a paper or pre-treated silicone plastic; b) — applying a hot melt adhesive or other processes, such as flexography, rolls, or others onto the silicone treated tape; c) — cooling of the adhesive, in the case of the hot melt, by means of passing between cooling anti-adherent rolls; d) — applying a layer of varnish onto the adhesive by means of known flexography processes; e) — drying of the varnish by means of heat or ultra-violet radiation or electro beam or catalyzer or others; and f) — rewinding of the finished product.

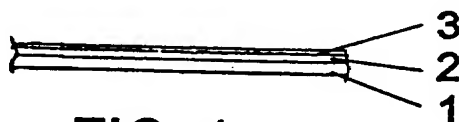
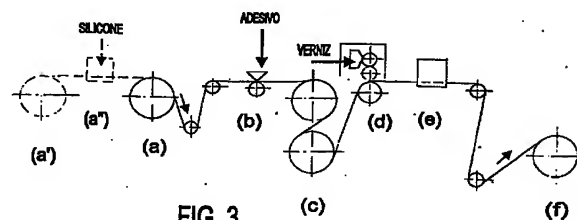


FIG. 1

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## Description

**[0001]** The present descriptive report refers to a patent of invention for self-adhesive articles and the process for obtaining the same, belonging to the group of labels, tags, and similar self-adhesive articles and that were developed in order to obtain something simpler and at a lower cost than the conventional methods.

**[0002]** The label, tags, and other self adhesives supplied to the end user in a tape that are already known are substantially comprising: a frontal layer of plastic that protects the print, an adhesive layer, that adheres to the layer that protects the print; by the printed layer; a layer of plastic or paper, the frontal face of which serves as the base for the printing; an adhesive layer of the type that is pressure sensitive incorporated on to the backside of the paper layer; and a layer that protects the adhesive (liner) made of paper or silicone-treated plastic, that is adhered on to the adhesive layer.

**[0003]** Despite the broad use of this type of label, tag, or other self-adhesive, some inconveniences may be attributed to them, among which is a certain constructive complexity, due to the large number of layers, which results, consequently, in a manufacturing process which is equally relatively complex, as it involves numerous steps.

**[0004]** Such complexity involved with the label, tag, or similar items and the respective obtainment process, as it would have to be, ends up also reflecting negatively in the final cost of the product.

**[0005]** Another inconvenience of this type of label, tag, or similar self-adhesive item is related to the fact that it is relatively thick, which may lead to it being compromised or even detached from the surface to which it is attached, when it is rubbed against other surfaces.

**[0006]** Thus, one objective of the self-adhesive article and the process for obtaining the same, the object of this patent of invention, is to obtain an article that is of a simple and efficient construction, that may be obtained through a manufacturing process that is equally simplified with regards to the conventional method.

**[0007]** Another objective is to provide an article that, due to the simplified construction and manufacturing, has a lower cost.

**[0008]** Another objective is to provide an article that is of a lesser thickness, that will not be compromised or detached from the surface that it is applied to when friction is applied, and adapts easily when applied on irregular surfaces.

**[0009]** Considering the problems that are referred to above, and in the proposal to overcome them, and aiming to meet the listed objectives, a self-adhesive article was developed for the obtainment of labels and similar items, and the process for obtaining the same, the purposes of this patent of invention; said self-adhesive article substantially comprising, a film tape, comprising: a single frontal layer that is the base for the print, obtained from a varnish; an intermediate, pressure sen-

sitive layer and a third layer to protect the adhesive (liner), made of paper or silicone treated plastic. The manufacturer of the label or tag or similar self-adhesive receives the article as described above and applies: a printed layer on top of the varnish layer; and a sealing layer on top of the print, when necessary, made of plastic and adhesive, and if the case may be, carry out other steps.

**[0010]** Thus, the final product and the entire production process thereof are simplified with regards to the similar conventional items, meeting one of the objectives of the invention.

**[0011]** Such product and process simplicity ....  
...the base for the print 1 obtained from treated varnish; an intermediate layer 2 of pressure sensitive adhesive; and a layer to protect the adhesive (liner) 3, obtained by a layer of silicone and a layer of paper or plastic (fig. 1).

**[0012]** The varnish may be: transparent, white, or colored, and with a thickness on the order of 1 to 10 microns.

**[0013]** The adhesive may be: transparent, white, or colored of the type that dries by heat or ultra-violet rays radiation or by catalyzer or the other common types.

**[0014]** The manufacturers of labels, tags, or similar items receive the product, as described above, and applies onto the varnish layer 1, a printed layer 10, on this layer, a sealing layer, made of plastic 11 and adhesive 12 (fig. 2) and undergoes other manufacturing steps, such as cutting and other procedures.

**[0015]** The process of obtaining the article (fig. 3) is continuous and consists in the movement of rolls of paper or silicone treated plastic strips, throughout the steps of processing and substantially comprising, through the steps of: a) — unrolling of a strip of paper or plastic pre-treated with silicone; b) — applying a hot melt adhesive or other processes, such as flexography, rolls, or others onto the silicone treated tape; c) — cooling of the adhesive, by passing between cooling anti-adherent rolls; d) — application of a varnish layer on top of the adhesive by means of flexography; e) — drying of the varnish by means of heat or ultra-violet radiation or "electro-beam" or catalyzers or others; f) — rewinding of the finished product.

**[0016]** The paper or silicone-treated plastic are pre-treated with silicone, pursuant to what is described above, or another option, may be treated with silicone during the production. In this case, the process includes, primarily, step of a') — unrolling of the paper or plastic tape; and a'') — the application of silicone onto the paper or plastic tape in production.

**[0017]** At the end of the process, the article obtained is rewound, according to what is described above, or, if such is the case, may move to the steps of obtaining the label or tag or others mentioned above, as printing, application of the scaling layer, cutting, and others.

**[0018]** Among the basic solutions, described above, it is requested that the article and process, the purposes

of this present patent of invention, may present variations when the materials, dimensions, constructive solution, step sequences, and others without departing from the scope of requested protection.

## DRAWINGS

[0019]

FIGURE ONE

FIGURE TWO

FIGURE THREE — Silicone — Adhesive - Varnish

## Claims

1. "SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILAR ITEMS", preferably, containing, a film in the form of a tape, characterized in that substantially comprising: a single frontal layer that serves as a base for the printing (1), obtained from varnish; an intermediate layer (2) of pressure-sensitive adhesive; and a layer for the protection of the adhesive (liner) (3), obtained from a silicone layer and a layer of paper or plastic.
2. "SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILAR ITEMS", according to claim 1, characterized in that the varnish may be: transparent, white, or colored.
3. "SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILAR ITEMS", according to claim 1, characterized in that the varnish has a thickness on the order of 1 to 10 microns.
4. "SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILAR ITEMS", according to claim 1, characterized in that the adhesive may be: transparent, white, or colored and of the type that dries by heat or ultra-violet ray radiation or by catalyzer or others.
5. "PROCESS FOR OBTAINING THE SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILARS", characterized in that it is substantially comprising, the steps of: a) — unrolling of a paper or plastic tape pre-treated with silicone; b) — applying the hot melt adhesive or other processes, such as flexography, rolls or others onto the tape treated with silicone; c) — cooling of the adhesive, by means of passing between cooling, anti-adherent rolls; d) — applying a layer of varnish on to the adhesive by means of flexography; e) — drying of the varnish by means of heat or ultra-violet radiation or "electro beam" or catalyzer or others; and f) — rewinding of the finished product.

6. "PROCESS FOR OBTAINING THE SELF-ADHESIVE ARTICLE FOR THE OBTAINMENT OF LABELS AND SIMILARS", according to claim 5, characterized in that the paper or plastic is treated with silicone during the process, wherein the process anticipates the step of a') — unrolling of the paper or plastic tape; and a'') applying the silicone onto the paper or plastic tape in the process.

